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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/636,565	08/10/2000	Jean-Marc Wilhem	10000-12US(100081 US/WO)	6484

570 7590 11/06/2002

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EXAMINER	
CHOI, JACOB Y	
ART UNIT	**PAPER NUMBER**
2875	

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/636,565	Applicant(s) WILHEM ET AL.	
	Examin r Jacob Y Choi	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 4, 5, 6, 7, 9 & 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Verney (USPN 4,779,942).

Regarding claim 1, Verney discloses at least one light-emitting soured of a polychromatic white light with high radiant energy in the violet/blue wavelengths and with low residual energy in the red wavelengths band (Figure 4).

Regarding claim 2, Verney discloses the polychromatic white light furthermore has high radiant energy in the green/yellow and orange wavelengths band with low residual energy in the red wavelengths band (400-500 -> blue, 500-600 -> green, 600-700 -> red). (It is inherent that incandescent light bulb changes electrical energy to radiant energy)

Regarding claim 3, Verney discloses the white light-emitting source has an emission spectrum having a dominant in the violet/blue wavelengths and a dominant in the green/yellow wavelengths band (400-500 -> blue, 500-600 -> green, 600-700 -> red).

Regarding claim 4, Verney discloses the white light-emitting source has bichromatic-dominant emission spectrum with a violet/blue chrominance peak and a very wide range of chrominance from the green to the orange (400-500 -> blue, 500-600 -> green, 600-700 -> red).

Regarding claim 5, Verney discloses the white light-emitting source has an emission spectrum with a main peak wavelength of less than 492 nanometers, the main peak being a narrow, high-intensity peak, and a secondary peak wavelengths ranging from 492 to 622 nanometers, the secondary peak being a wide, medium-intensity peak, with very low residual intensity at wavelengths of over 622 nanometers.

Regarding claim 6, Verney discloses the white light-emitting source gives direct lighting.

Regarding claim 7, Verney discloses the white light-emitting source gives ambient lighting or indirect lighting.

Regarding claim 9, Verney discloses the light-emitting source of white light gives lighting guided in a translucent board of the instruments panel.

Regarding claim 15, Verney discloses illuminate a cockpit or an instruments panel, where the light source comprises a white light-emitting panel.

3. Claims 1, 2, 5, 6, 7, 9 & 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Task (USPN 4,580,196).

Regarding claim 1, Task discloses at least one light-emitting soured of a polychromatic white light with high radiant energy in the violet/blue wavelengths and with low residual energy in the red wavelengths band (Figure 3).

Regarding claim 2, Task discloses the polychromatic white light furthermore has high radiant energy in the green/yellow and orange wavelengths band with low residual energy in the red wavelengths band (400-500 -> blue, 500-600 -> green, 600-700 -> red). (inherent that incandescent light bulb changes electrical energy to radiant energy).

Regarding claim 5, Task discloses the white light-emitting source has an emission spectrum with a main peak wavelength of less than 492 nanometers, the main peak being a narrow, high-intensity peak, and a secondary peak wavelengths ranging from 492 to 622 nanometers, the secondary peak being a wide, medium-intensity peak, with very low residual intensity at wavelengths of over 622 nanometers.

Regarding claim 6, Task discloses the white light-emitting source gives direct lighting.

Regarding claim 7, Task discloses the white light-emitting source gives ambient lighting or indirect lighting.

Regarding claim 9, Task discloses the light-emitting source of white light gives lighting guided in a translucent board of the instruments panel.

Regarding claim 15, Task discloses illuminate a cockpit or an instruments panel, where the light source comprises a white light-emitting panel.

4. Claims 1, 2, 3, 4, 5, 6, 7, 8, 10, 41, 42, 43, 46 & 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Doughty et al. (USPN 5,851,063).

Regarding claim 1, Doughty et al. discloses at least one light-emitting soured of a polychromatic white light with high radiant energy in the violet/blue wavelengths and with low residual energy in the red wavelengths band (Figure 1 @ 6000K).

Regarding claim 2, Doughty et al. discloses the polychromatic white light furthermore has high radiant energy in the green/yellow and orange wavelengths band with low residual energy in the red wavelengths band (400-500 -> blue, 500-600 -> green, 600-700 -> red). (inherent that incandescent light bulb changes electrical energy to radiant energy)

Regarding claim 3, Doughty et al. discloses the white light-emitting source has an emission spectrum having a dominant in the violet/blue wavelengths and a dominant in the green/yellow wavelengths band (400-500 -> blue, 500-600 -> green, 600-700 -> red).

Regarding claim 4, Doughty et al. discloses the white light-emitting source has bichromatic-dominant emission spectrum with a violet/blue chrominance peak and a very wide range of chrominance from the green to the orange (400-500 -> blue, 500-600 -> green, 600-700 -> red).

Regarding claim 5, Doughty et al. discloses the white light-emitting source has an emission spectrum with a main peak wavelength of less than 492 nanometers, the main peak being a narrow, high-intensity peak, and a secondary peak wavelengths ranging

from 492 to 622 nanometers, the secondary peak being a wide, medium-intensity peak, with very low residual intensity at wavelengths of over 622 nanometers.

Regarding claim 6, Doughty et al. discloses the white light-emitting source gives direct lighting.

Regarding claim 7, Doughty et al. discloses the white light-emitting source gives ambient lighting or indirect lighting.

Regarding claim 8, Doughty et al. discloses the white light-emitting source is not filtered in the red wavelengths band.

Regarding claim 10, Doughty et al. discloses the light source is a white light-emitting diode.

Regarding claim 46, Doughty et al. discloses the polychromatic white light furthermore has radiant energy in the green/yellow or orange wavelengths bands with low residual energy in the red wavelengths band.

Regarding claim 41, Doughty et al. discloses a ramp of white light-emitting diodes emitting a polychromatic white light with high radiant energy in the violet/blue wavelengths and low residual energy in the red wavelengths band.

Regarding claim 51, Doughty et al. discloses the polychromatic white light furthermore has high radiant energy in the green/yellow or orange wavelengths bands with low residual energy in the red wavelengths band.

Regarding claim 42, Doughty et al. discloses the polychromatic white light furthermore has high radiant energy in the green/yellow and orange wavelengths bands with low residual energy in the red wavelengths band.

Regarding claim 43, Doughty et al. discloses the polychromatic white light has an emission spectrum comprising a dominant in the violet/blue wavelengths band and a dominant in the green/yellow wavelengths band.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9, 12, 37, 14, 15, 38, 39, 40, 44, 45, 50 & 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doughty et al. (USPN 5,851,063) in view of Task (USPN 4,580,196).

Regarding claim 9, Doughty et al. discloses the claimed invention, explained above, except for the light-emitting source being used for the instruments panel. Task teaches that it is known to modify light-emitting source (low red light wavelength zone) for the instruments panel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use white light source of Doughty et al., as taught by Task in order to illuminate instrument panel, where one would be motivated to use more efficient light-emitting source of Doughty et al., with low red light wavelength zone, to illuminate the instrument panel without disturbing operation of N. V. goggle.

Regarding claims 12 & 37, Doughty et al. discloses the claimed invention, explained above, except for the light-emitting source being arranged on a printed circuit.

Task teaches that it is known to modify light-emitting diode onto a printed circuit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use white light source of Doughty et al., as taught by Task in order to mount light emitting diodes onto the printed circuit.

Regarding claims 14 & 15, Doughty et al. discloses the claimed invention, explained above, except for a specific use of the light source on a cockpit or an instrument panel. Task teaches that it is well known in the art use illuminate an instrument panel. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use white light source of Doughty et al., as taught by Task in order to illuminate an instrument panel.

Regarding claim 50, Doughty et al. in view of Task discloses the claimed invention, explained above. In addition, Doughty et al. discloses the polychromatic white light furthermore has high radiant energy in the green/yellow or orange wavelengths bands with low residual energy in the red wavelengths band.

Regarding claim 38, Doughty et al. in view of Task discloses the claimed invention, explained above. In addition, Task discloses the light-emitting diode or the printed circuit is fixedly joined to a screw-in or bayonet type socket (Figure 2).

Regarding claim 39, Doughty et al. in view of Task discloses the claimed invention, explained above. In addition, Doughty et al. discloses the polychromatic white light furthermore has high radiant energy in the green/yellow and orange wavelengths bands with low residual energy in the red wavelengths band.

Regarding claim 40, Doughty et al. in view of Task discloses the claimed invention, explained above. In addition, Doughty et al. discloses the polychromatic white light has an emission spectrum comprising a dominant in the violet/blue wavelengths band and a dominant in the green/yellow wavelengths band.

Regarding claim 44, Doughty et al. discloses the claimed invention, explained above, except for means of lighting in the visible range, means of lighting in the infrared range and switching means to make a choice between a lighting position in the visible range and a lighting position in the infrared range. Task discloses means of lighting in the visible range, means of lighting in the infrared range and switching means to make a choice between a lighting position in the visible range and a lighting position in the infrared range (column 7, lines 55-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use white light source of Doughty et al., as taught by Task in order to illuminate instrument panel, where one would be motivated to use more efficient light-emitting source of Doughty et al., with low red light wavelength zone, to illuminate the instrument panel without disturbing operation of N. V. goggle.

Regarding claim 45, Doughty et al. in view of Task discloses the claimed invention, explained above. In addition, Doughty et al. discloses the polychromatic white light furthermore has high radiant energy in the green/yellow and orange wavelengths bands with low residual energy in the red wavelengths band.

Regarding claim 52, Doughty et al. in view of Task discloses the claimed invention, explained above. In addition, Task discloses the polychromatic white light

furthermore has high radiant energy in the green/yellow or orange wavelengths bands with low residual energy in the red wavelengths band.

7. Claims 11, 13, 53 & 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doughty et al. (USPN 5,851,063) in view of Aikens et al. (USPN 5,031,080).

Regarding claim 11, Doughty et al. discloses the claimed invention, explained above, except for a colored hood that is not filtered in the red wavelengths band. Aikens et al. teaches that it is know to modify the portable cockpit light assembly with or without filtering light source to form a colored indicator, especially a green, yellow or red indicator. It would have been obvious to one having ordinary skill in the art at the time the invention was made use white light source of Doughty et al., as taught by Aikens et al. in order to provide a hood that is not filtered in the red wavelengths band, since one would be motivated to use benefits of Doughty et al.'s light source (with low red light wavelength zone, for correct operation of N. V. goggle) as a cockpit light assembly.

Regarding claim 13, Doughty et al. discloses the claimed invention, explained above, except the white light-emitting diode or the printed circuit is fixedly joined to a screw-in or bayonet type socket. Aikens et al. teaches that it is know to mount light-emitting diode onto the printed circuit where the circuit is fixedly joined to a screw-in or bayonet type socket (well known in the art). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use socket member of Aiken et al. for the light source of Doughty et al., in order to mount light emitting source.

Regarding claims 53 & 54, Doughty et al. discloses at least one light-emitting source of polychromatic white light with high radiant energy in the violet/blue wavelengths band and with low residual energy in the red wavelengths band. Aikens et al. discloses a light source that illuminates one of an indictor lens, a position a position indicator, a landing light, an anti-collision light, a flight training light, a cockpit, and instrument panel and a translucent board. It would have been obvious to one having ordinary skill in the art at the time the invention was made use white light source of Doughty et al., as taught by Aikens et al. in order to provide a hood that is not filtered in the red wavelengths band, since one would be motivated to use benefits of Doughty et al.'s light source (with low red light wavelength zone, for correct operation of N. V. goggle) as a cockpit light assembly.

8. Claims 16-36, 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doughty et al. (USPN 5,851,063) in view of either Aikens et al. (USPN 5,031,080) or Task (USPN 4,580,196).

It has been held that to be entitled to weight in method claims, the recited structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of particular structure. *Ex parte Pfeiffer*, 1962 C.D. 408 (1961). Therefore, similarly as explained above, Doughty et al. in view of either Aikens et a. or Task discloses to illuminate an aircraft instrument panel or an element capable of coming into a pilot's field of vision, without disturbing a light intensifier night vision imaging system, comprising the step of using an illumination

means at least one light-emitting source of a polychromatic white light with high radiant energy in the violet/blue wavelengths band and with low residual energy in the red wavelengths band.

The polychromatic white light furthermore has high radiant energy in the green/yellow or orange wavelengths bands with low residual energy in the red wavelengths band.

The polychromatic white light further has high radiant energy in the green/yellow and orange wavelengths bands with low residual energy in the red wavelengths band.

The white light-emitting source has an emission spectrum comprising a dominant in the violet/blue wavelengths band and a dominant in the green/yellow wavelengths band.

The white light-emitting source has a bichromatic-dominant emission spectrum with a violet/blue chrominance peak and a very wide range of chrominance from the green to the orange.

The white light-emitting source has an emission spectrum with a main peak wavelength of less than 492 nanometers, the main peak being a narrow, high-intensity peak, and a secondary peak wavelengths ranging from 492 to 622 nanometers, the secondary peak being a wide, medium-intensity peak, with very low residual intensity at wavelengths of over 622 nanometers.

The white light-emitting source gives direct lighting.

The white light-emitting source gives ambient lighting or indirect lighting.

The white light-emitting source is not filtered in the red wavelengths band.

The light-emitting source of white light gives lighting guided in a translucent board of the instruments panel.

The light source is a white light-emitting diode.

A colored indicator, especially a green, yellow or red indicator, wherein the light-emitting diode is covered with a colored hood that is not filtered in the red wavelengths band.

To form position indicators, landing lights, anti-collision lights or flight training lights in an aircraft, wherein the polychromatic white light source comprises a plurality of white light-emitting diodes arranged on a printed circuit.

The white light-emitting diode or the printed circuit is fixedly joined to screw-in or bayonet type socket.

Illuminate a cockpit or an instruments panel, wherein the light source comprises a ramp of white light-emitting diodes.

Illuminate a cockpit or an instruments panel, wherein the light source comprises a white light-emitting panel.

Incandescent lamps so as the aircraft lighting system is compatible with a light intensifier night vision system, comprising the step of replacing at least a part of the incandescent lamps by light-emitting diodes emitting a polychromatic white light with high radiant energy in the violet/blue wavelengths band and low residual energy in the red wavelengths band.

The polychromatic light furthermore has high radiant energy in the green/yellow wavelengths band or the orange wavelengths band with low residual energy in the red wavelengths band.

The polychromatic white light furthermore has high radiant energy in the green/yellow and orange wavelengths bands with low residual energy in the red wavelengths band.

The light emitted by the white light-emitting diodes is not filtered in the red wavelengths band.

Incandescent lamps, so as the system is compatible with a light intensifier night vision system, comprising the step of replacing each incandescent lamp by a plurality of light-emitting diodes emitting a polychromatic white light with high radiant energy in the violet/blue wavelengths band and low residual energy in the red wavelengths band.

The polychromatic light furthermore has high radiant energy in the green/yellow wavelengths band and the orange wavelengths band with low residual energy in the red wavelengths band.

The light emitted by the white light-emitting diodes is not filtered in the red wavelengths band.

Response to Amendment

9. Examiner acknowledges that applicant has amended claims 1-45 and newly added claims 46-52.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Seib (USPN 5,539,628) – filtered lamp assembly

Duggal et al. (USPN 6,294,800) – phosphors for white light generation from UV emitting diodes

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Y Choi whose telephone number is (703) 308-4792. The examiner can normally be reached on Monday-Friday (10:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-7724.

JC
October 29, 2002

Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800